REMARKS

Applicant has received and reviewed the Final Office Action mailed by the Office on March 26, 2007 (hereinafter, "Final Action"), and submits this response to the Final Action. Claims 1-38 were pending in the present application. Applicant amends Claims 24 to 34 to clarify claimed subject matter and/or correct informalities. The original specification and drawings support these claim amendments at least at pages 25 to 29. Therefore, these revisions introduce no new matter and do not change the scope of the claims.

Claims 1-38 are for consideration upon entry of the present Amendment. Applicant requests favorable consideration of this response and allowance of the subject application based on the following remarks.

Applicant's amendments and remarks after Final are appropriate under 37 C.F.R. §1.116 because they address the Office's remarks in the Final Action, and thus could not have been presented earlier. In addition, the amendments and remarks should be entered to place the application in better form for appeal.

Claim Rejections 35 U.S.C. §101

Claims 24-34 stand rejected under 35 U.S.C. §101 as being allegedly directed to non-statutory subject matter. Applicant amends these claims to recite the feature, "computer-readable storage media". Support may be found in the specification at least at pages 25 to 29. Therefore, these revisions introduce no new matter and do not change the scope of the claims. Claims 24 to 34 are in condition for allowance. Applicant respectfully requests withdrawal of the §101 rejections.

Claim Rejections 35 U.S.C. §103

Claims 1-38 are rejected under 35 U.S.C. §103(a) as being unpatentable by non-patent literature titled "Efficient Filtering of XML Documents for Selective Dissemination of Information" by Mehmet Altinel, et al., 26th VLDB Conference, 2000, page 53-64 (hereinafter "Altinel") in view of non-patent literature entitled "On Efficient Matching of Streaming XML Documents and Queries" by Sailaja et al., University of British Columbia, Canada, 2002, pages 1-20 (hereinafter "Sailaja"). Applicant respectfully traverses this rejection.

Independent **Claim 1** recites:

> A method, comprising:
> receiving an input, wherein the input comprises elemental language units;
> generating at least some of the elemental language units into opcodes;
> traversing an opcode tree of hierarchical nature that includes a plurality of opcode nodes which together define opcodes that should be executed to evaluate a plurality of queries;
> executing each of the opcode nodes in the opcode tree as each opcode node is encountered in the traversal to evaluate the plurality of queries against the input;
> maintaining the opcode tree that is used during processing by making a copy of the opcode tree; and
> updating the opcode tree copy.

Altinel and Sailaja Fail to Teach or Suggest Features of Claim 1

First, Applicant agrees with the Office that Altinel fails to teach or suggest "input comprise elemental language units, generating at least some of the elemental language units into opcodes, maintaining the opcode tree that is used during processing by making a copy of the opcode tree, and updating the opcode tree copy", as recited in Applicant's Claim 1.

The evidence shows that Altinel is directed to XML-based SDI system and the XPath language (page 54, section 1). The evaluation of XPath pattern yields an object whose type can be either a node set (i.e., an unordered collection of nodes without duplicates), a boolean, a number, or a string (page 54, section 2.2). The SAX event-based interface reports parsing events and does not usually build an internal tree (page 57, section 4.2). In Altinel, the document generator always starts from the root of the DTD, while the query generator may start at any level depending on which element node it initially chooses (page 60, section 6.2). Thus, Altinel fails to teach or suggest the features recited in Applicant's Claim 1.

Second, Sailaja fails to compensate for the deficiencies of Altinel. The Office states Sailaja teaches elemental language units (page 6). Applicant respectfully disagrees as Sailaja is directed towards efficient matching of streaming XML documents and queries (Abstract and Title). In particular, Sailaja describes P is a unique node which corresponds to the element returned by the query (page 2, section 1), which is not the same as "the input comprises elemental language units", as recited in Applicant's Claim 1.

Third, Sailaja fails to teach or suggest "generating at least some of the elemental language units into opcodes", as recited in Applicant's Claim 1. Rather, Sailaja describes an example of query Q, where the element BRAND appears before the NAME element (page 4, section 2). In contrast, Applicant's Claim 1 generates elemental language units into opcodes, which are machine language instruction that specifies the operation to be performed (see definition in webopedia.com; en.Wikipedia.org/wiki/opcode).

Fourth, Applicant asserts "Name" or "Brand" is not the same as Applicant's elemental language unit and opcodes. Rather, Sailaja describes order predicates, which

states an order predicate *u* must precede v in any matching (page 5, section 2). The elements "Name" and "Brand" are merely examples of order predicates. Thus, Sailaja fails to teach or suggest the features of Claim 1.

Altinel and Sailaja, alone or in combination, do not teach or suggest "input comprise elemental language units, generating at least some of the elemental language units into opcodes, maintaining the opcode tree that is used during processing by making a copy of the opcode tree, and updating the opcode tree copy", as recited in Applicant's Claim 1.

The evidence is insufficient to support a prima facie obviousness rejection of the claimed subject matter. Applicant respectfully submits that the cited references do not render the claimed subject matter obvious and that the claimed subject matter, therefore, patentably distinguishes over the cited references. For all of these reasons, Applicant respectfully requests the §103(a) rejection of these claims should be withdrawn.

Independent Claims 7, 15, 24, and 35 are directed to a opcode tree data structure, a system, a computer-readable storage media, and a method, respectively. Each of these claims are allowable for reasons similar to those discussed above with respect to Claim 1.

For example, Altinel and Sailaja do not teach or suggest "an opcode tree data structure, hierarchical opcode nodes, plurality of opcodes that are executed as each opcode node is encountered, opcode tree is copied and updated", as recited in Applicant's Claim 7. For all of these reasons, Applicant respectfully requests the §103(a) rejection of these claims should be withdrawn.

By way of illustration, Altinel and Sailaja fail to teach or suggest "a language analysis module generating elemental language input into opcodes, opcode tree of hierarchical nature, the opcode tree copied and updated", as recited in Applicant's Claim 15.

Consequently, Applicant respectfully requests the §103(a) rejection of these claims should be withdrawn.

Dependent Claims 2-6, 8-14, 16-23, 25-34, and 36-38 depend directly or indirectly from one of independent Claims 1, 7, 15, 24, and 35, respectively, and are allowable by virtue of this dependency, as well as for the additional features that they recite.

Turning to independent Claims 7 and 15, Applicant points out Altinel and Sailaja fail to teach or suggest the recited features.

Conclusion

Claims 1-38 are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of the subject application. If any issue remains unresolved that would prevent allowance of this case, the Office is requested to contact the undersigned attorney to resolve the issue.

Respectfully Submitted,

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